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ABSTRACT

Curriculum analyses, written by professional reading educators, of the 1978 Illinois Inventory of Educational Progress (IIEP) results, and teacher expectations regarding reading are presented. A random sample of 7,200 Illinois students (grades 4, 8, 11) within 360 schools were tested: results reflected their educational performance in reading items employing content drawn from literature (53%), life skills (29%), social science material (14%), and science (4%). The items tested literal comprehension (80%), inferential comprehension (16%), and interpretive comprehension (4%). General conclusions emerging from the curricular analyses included: (1) students have gained reading proficiency as they progressed through school: (2) students have learned to read for literal comprehension by grade 4: (3) scores for grades 8 and 11 were highest on material related to everyday life: (4) high scores were related to simple vocabulary, syntax, context, and content: (5) low scores were traceable to unfamiliar vocabulary or a lack of thoughtful analysis. Comparisons were made between teachers' expectations and student performance across grade levels. Teachers of grades 4 and 8 were accurate in their estimation of student performance, but grade 11 teachers underestimated student performance on 14 of the 17 objectives tested. (RL)

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ILLINOIS INVENTORY OF EDUCATIONAL PROGRESS

Reading Curricular Analyses and Teacher Expectation Result

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FOREWORD

The 1978 Illinois Inventory of Educational Progress (IIEP) was a compilation of tests given to fourth, eighth, and eleventh grade students in mathematics, reading, and citizenship.

The present report contains curricular analyses of the reading results and the teacher expectation results. The Illinois State Board of Education has published a number of reports on the 1978 IIEP results.

The teacher expectation survey asked teachers within the three subject areas to give their expectations of student performance on the test items; the teacher expectation survey was conducted at the same time the test was given.

It is hoped that this report will be helpful to all Illinois educators and citizens concerned about the educational accomplishments of our schools.

This report was prepared by C. Thomas Kerins, Mervin M. Brennan, Kenneth R. Redding, Leslie J. Fyans, Jr., and Mary E. Raikes. Their efforts and the efforts of many Illinois educators are gratefully acknowledged.

Joseph M. Cronin
State Superintendent of Education

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INTRODUCTION

Each spring the Illinois State Board of Education administers the Illinois Inventory of Educational Progress (IIEP).

Purpose and Goals

The purpose of the IIEP is to measure what Illinois students know and can do in certain subject matter areas and to provide that information to educational decision makers.

The goals of the IIEP are:

1) to make available reliable, valid, and relevant data on the educational achievement of Illinois students, and

2) to identify any trends (growth, stability, or decline) in educational achievement which occur over time.

Results of the 1978 IIEP

The present report contains curricular analyses of the 1978 IIEP results and teacher expectations regarding reading. Experienced teachers and experts wrote the curricular analyses. The analyses are solely those of the experts and are not to be taken as the official position of the State Superintendent of Education or the Illinois State Board of Education.

At the time of the IIEP administration to students, teachers in participating schools were asked to critique each test item. The teachers reported whether or not students had been exposed to the subject matter and whether or not the item was of appropriate difficulty level. They estimated the percentage of students who would attain the correct answer.

The processes used to obtain the curricular analyses and teacher expectations are described in Appendices A and B.

Student Sampling Model

A random sample with two sampling stages was used to select those students attending Illinois public schools who participated. In the first stage, a random sample of approximately 360 schools throughout the state was drawn. Then a random sample of the students within these schools was drawn from the list of eligible students submitted by the school. The final sample included about 7,200 Illinois students at the fourth, eighth, and eleventh grades. The sample reflected the educational performance of students approaching the end of primary, elementary, and secondary levels of education.

IIEP Reports

Appendix E is a list of publications regarding the IIEP results.

SECTION I

CURRICULAR ANALYSES BY EXTERNAL REVIEWERS

CHAPTER 1

OVERVIEW ANALYSIS OF THE READING RESULTS

Introduction

The 1978 IIEP assessed student reading skills at the fourth, eighth, and eleventh grade levels. For each of the three tests, student results were analyzed and interpreted by professional reading educators. The framework for analysis was the reading objectives matrix in Appendix C. The present overview analysis involved a review of all three tests, student results, and professional analyses of those results.

Several general conclusions emerged from the curricular analyses and are presented in the form of headlines.

- STUDENTS GAIN READING PROFICIENCY AS THEY PROGRESS THROUGH SCHOOL.

- BY FOURTH GRADE, STUDENTS HAVE LEARNED TO READ FOR LITERAL COMPREHENSION.

- EIGHTH AND ELEVENTH GRADE SCORES WERE HIGHEST ON MATERIAL RELATED TO EVERYDAY LIFE.

- HIGH SCORES WERE RELATED TO SIMPLE VOCABULARY, SYNTAX, CONTEXT, AND CONTENT.

- LOW SCORES WERE TRACEABLE TO UNFAMILIAR VOCABULARY OR A LACK OF THOUGHTFUL ANALYSIS.

The Test Instruments

Fifty-three percent of the reading items employed content drawn from the literature category, 29% of the items were related to life skills, 14% reflected social science material, and 4% were concerned with science content. Regarding reading abilities, 80% of the items tested literal comprehension, the ability to read and understand the direct (stated) meaning of a passage; 16% measured inferential comprehension, the ability to read and understand the implied meaning of a passage; and 4% assessed interpretive comprehension, the ability to read and evaluate a passage in relation to (stated) criteria. Critical comprehension, the ability to apply personal, defensible criteria in interpreting and evaluating a passage, was not assessed.

Display 1 below presents the percentage breakdown of reading items for each grade level according to the reading categories.

Display 1

PERCENTAGES OF ITEMS BY CATEGORIES AND GRADE LEVELS

Categories	Fourth Grade	Eighth Grade	Eleventh Grade
Life Skills	18%	33%	31%
Social Science	0%	21%	15%
Literature	82%	46%	46%
Science	0%	0%	8%

Display 2 below presents the percentage breakdown for reading abilities.

Display 2

PERCENTAGES OF ITEMS BY ABILITIES AND GRADE LEVELS

Abilities	Fourth Grade	Eighth Grade	Eleventh Grade
Literal Comprehension	89%	81%	75%
Inferential Comprehension	4%	15%	22%
Interpretive Comprehension	7%	4%	3%

The Test Results

The test results indicate that students gain proficiency in reading skills as they progress through school. Student achievement was consistently highest for eleventh graders, a little less for eighth graders, and still less for fourth graders. In most cases, the students' proficiency appears to make steady increases. There may be two reasons for a steady growth pattern. First, once the basic skills of the reading process have been mastered, any additional experience (practice) will increase one's proficiency in applying the process. Secondly, nearly 85% of the eleventh graders indicated that they had taken four or more courses in reading or literature since eighth grade.

Comparisons between student abilities for literal, inferential, and interpretive comprehension are highly conjectural given the distribution of items, the differences of content, and the varying difficulty levels of the items. Nevertheless, some conclusions can be made.

Eighth and eleventh grade students scored higher on items dealing with literal comprehension than on those requiring inferential or interpretive comprehension. This is to be expected since reading instruction begins with literal comprehension.

In regard to the literal comprehension items in the fourth grade test, the vocabulary appears to be at fourth grade level. However, the syntax of several of these items appears to be of greater difficulty than fourth grade level.

Students scored at an acceptable level on items dealing with inferential comprehension. On comparable items eleventh grade students scored higher than eighth graders, and the average percentage of correct responses was 76% for the eleventh grade items and 69% for the eighth grade.

Students generally scored lowest on items which required interpretive comprehension. However, the tests contained so few items attempting to measure interpretive comprehension that no conclusions can be drawn from the results.

Inferential and interpretive comprehension require the reader to interact with the printed page, to bring information and experience to what is written, and to question the author's statements and style. Students performed fairly well on these types of test items, but teachers must place more emphasis on reading as thinking if students are to develop these abilities as many people feel they should.

Discussion of the Results

The development of evaluation instruments for determining the reading achievement of students in elementary, junior high, and high school is a difficult task.

It is difficult to evaluate a process which is interdependent with content of different fields. Reading is a process in which the content is drawn from various disciplines, such as history, literature, biology, and anthropology. However, the format of this test with items imbedded in the text, rather than following the text, is representative of a real reading situation and should realistically assess students' ability to deal with the printed word. The tests are a good beginning, but future tests can be improved. They should be constructed so that items are at a consistent difficulty level for vocabulary and syntax, are content dependent, and deal with content sufficiently common to the experiential background of the students.

Student success on these tests supports the conclusion that student reading proficiency increases with experience and practice for all types of content.

The teaching of reading should place greater demands on students to learn basic reading skills early, especially decoding and literal comprehension skills. Teachers must provide students with a wide variety of experiences and many opportunities to practice process skills. Students need considerable experiences and practice in order to learn to classify, form generalizations, draw conclusions, make judgments, and evaluate.

The present evaluation instruments provide Illinois educators with a base from which to determine how much growth will occur in the future. We are "getting the job done" today, but we can improve students' reading proficiency at all levels in all areas of comprehension.

CHAPTER 2

ANALYSIS OF THE FOURTH GRADE RESULTS

Introduction

The fourth grade IIEP reflects reading material familiar to most fourth grade students. Fourth graders have had experience with a traditional reading textbook, library books, poetic passages, advertisements, and newspapers. Twenty-three of the test items were drawn from the category of literature. The remaining five items related to life skills.

The test employed material which is of interest to most fourth grade students. Such selectiveness is necessary in any test which purports to assess student accomplishment in the complex area of reading.

Results of the Test

Most of the items measured literal comprehension objectives. In view of the fact that we are in a rapidly changing "television" world with its many distractions, fourth grade students did reasonably well on the test. However, we cannot be satisfied with an average of two-thirds correct for the items testing literal comprehension. Although much reading requires abilities over and above literal comprehension, an ability to read and understand the direct meaning of a passage is basic to all reading. Concentrated efforts should be made to improve students' abilities to read and analyze words, phrases, and sentences in order to understand the meaning intended by the writer.

Three-fourths of the students chose the correct response for the one item which assessed inferential comprehension, and three-fifths of them were correct on the two interpretive comprehension items. However, three items are insufficient for any indication of student abilities regarding the two objectives. Future tests should contain more items relating to these objectives. After more results are obtained, we will have some indication of student ability to understand the implied meanings of passages and to evaluate author's statements.

Discussion of the Results

The results of the IIEP show that fourth grade students in Illinois have learned to read. However, there is room for improvement. Educators must expect more of themselves and of students. Literal comprehension is the first step and the primary objective. Students must master the meaning of words and go on to understand the literal meaning of a passage. Most students learn the skills of reading sequentially. That is, first they learn to read and understand the direct meaning of passages. After reasonable ability at literal comprehension is attained, they learn to make inferences about implied meaning and subsequently to evaluate what they read. Such sequential learning is the usual pattern. However, each student moves back and forth between literal, inferential, interpretive, and critical comprehension.

Additionally, students need special instructional approaches to acquire the particular skills they are struggling to attain. Teachers must be aware of as many teaching strategies as possible and remain alert to each student's needs and capabilities. With competence and dedication, we can help Illinois students read better.

CHAPTER 3

ANALYSIS OF THE EIGHTH GRADE RESULTS

Introduction

The eighth grade reading test included content from the areas of literature, social science, and everyday life (life skills). The IIEP is to be commended for the broad spectrum of content which it included. The test employed a variety of reading formats including narrative passages, poetry, advertisements, food labels, street signs, and a television schedule. Thirty-six of the 48 items were presented in cloze format, that is, contained blanks in the passage which were to be filled in from the available choices.

Results of the Test

Results revealed that eighth grade students were successful in skimming passages to note details and locate specific information. The students did quite well in literal comprehension. The average percentage correct for such items was 77%. For the more difficult levels of inferential and interpretive comprehension, scores were somewhat lower. Students had more difficulty when required to make inferences and evaluate passages according to indicated criteria.

Literal Comprehension

The eighth grade scores were moderately high on most items requiring literal comprehension. Ninety percent of the students were successful in noting the directions given on a can of insecticide (Objective 5) and identifying which television program was scheduled to be shown at a specified hour (Objective 1). Almost three-fourths of the students compared the contents of two containers successfully after reading the labels (Objective 5) and computed simple time equivalents correctly after studying part of a television schedule (Objective 1). Almost three-fourths of the students demonstrated knowledge of when final consonants are to be doubled before adding suffixes (Objective 37), and more than 80% were able to identify the appropriate word from a list of homonyms by using contextual clues (Objective 37).

Student scores dipped on several items measuring literal comprehension, and a very low score occurred on one such item. The correct response for that item was the word "deftly," which is a word of less than frequent occurrence in the experience of eighth grade students. When students were required to deal with difficult vocabulary, words having multiple meanings, long sentences, or unfamiliar content, scores were less high than on other items. Scores were highest when the content and vocabulary were related closely to everyday usage.

Inferential Comprehension

Scores averaged 69% for items which required students to identify the implied meaning of a passage. One would expect lower scores for inferential comprehension than for literal comprehension because inference is the more difficult level of the two. Students scored highest on items requiring simple inferences. For example, 80% of the students answered correctly that they would not be able to see two television programs in their entirety by noticing that their scheduled times overlapped (Objective 2). Scores were low when students were only slightly familiar with the content in question. For example, only 56% of the students realized that scientific data is the basic information of encyclopedia articles (Objective 14). Scores were at moderate, rather than high levels, when more than one logical step was necessary to make the correct inference. For instance, 70% of the students were correct in identifying "flies" as the insects which would not be killed by an insecticide which kills "crawling insects" (Objective 6).

Interpretive Comprehension

Interpretive comprehension is the most complex of the levels in the eighth grade test. The test contained only two items which assessed that level. Thus, no generalizations can be made with assurance. Nevertheless, the results on the two items reflect the general opinion of reading experts that interpretive comprehension is a high level skill. Regarding the story of space travel (Objective 39), only 64% of the students noted correctly that the author's purpose was to tell an imaginary space story, while only 38% of them correctly selected "A Visit to a Planet" as "the best title for the story" (Objective 39).

Critique of the Test

The eighth grade reading test is a good beginning. Nevertheless, there are some additions that could make a future test even better. More items which are content dependent and more passages which contain contextual clues should be included in future tests. Such items would offer more indicators of student ability to utilize the context in arriving at correct responses. Some cloze passages should be included in future reading tests. The cloze approach is an effective means of measuring reading comprehension. With this in mind, teachers would do well to provide students more opportunities to work with cloze passages since many students are not yet adept at selecting the correct responses in that format.

Discussion of Results

A number of student difficulties seemed traceable to difficulty with vocabulary and to lack of thoughtful analysis. One way to increase students' vocabularies is to structure vocabulary development activities into meaningful learning activities.

Although vocabulary is important, indeed essential, thinking is even more important. For several items students chose incorrect responses because they did not analyze the entire sentence before making their choice from the response alternatives. If students do not read beyond the cloze choices to analyze the entire context around the cloze, they will make incorrect responses more frequently than they would if they had read the complete passage before selecting their response. When reading printed materials, students often neglect to recognize that they are in communication with the writer. They attempt to learn facts without reflecting upon those facts. They neglect to formulate hypotheses, draw conclusions, examine purposes, and evaluate premises for acceptance or rejection. Students rarely question the printed page. They do not analyze facts or associate relationships. They need to be encouraged frequently to consider reading as thinking, to be critical, and to attempt to develop the higher level reading skills.

Teachers must emphasize that reading is thinking. Students should be encouraged to use the factual details in problem-solving situations to interpret, compare, and evaluate reading selections. Students must take more responsibility for establishing their own purposes when reading and become more actively involved in the reading process. They must be taught to read ahead, and to analyze the entire sentence in order to understand the complete thought. If teachers emphasize reading as thinking and encourage students to become active, energetic critics of what they read, we may be able to look forward to a future of students who can read simple material more accurately and analyze complex material more effectively.

CHAPTER 4

ANALYSIS OF THE ELEVENTH GRADE RESULTS

Introduction

The eleventh grade reading test measured many of the IIEP objectives (Appendix C). It measured the student's ability to read materials needed in everyday living as well as those needed in school-related tasks. Test items on everyday living were related to traffic and safety signals, television guides, advertisements, labels, and application forms. The items related to school tasks required some knowledge of subject matter or some experience as a prerequisite for successful reading. Other materials sampled were newspaper and magazine articles, poetry, and prose. The wide variety of source material tested is representative of the types of materials students should be able to read and understand.

Results of the Test

Analysis of the reading results is extremely difficult because reading abilities and content knowledge are intertwined and interdependent. When incorrect responses are chosen, it is often difficult and sometimes impossible to determine whether the mistake was caused by a lack of reading ability or lack of familiarity with the content. With this complexity in mind, an attempt is made to describe some results of the 1978 IIEP for eleventh grade students.

Objectives 1 - 16: Life Skills

A high percentage of eleventh graders demonstrated that they can read materials related to life skills. The lowest score was 43%; it was related to the technical and legalistic language included in an application of credit (Objective 9). The reading of such forms is difficult for students. The other 18 scores ranged from 75% to 94%. Five items involved consumer decision making based on reading labels and advertisements (Objective 5). The lowest score was 77%; the other four scores ranged from 83% to 92%. These are high percentages. When reading to acquire information which was important to them in their everyday life, students seemed to do reasonably well.

Objectives 17 - 36: Social Science

Items based on social science content resulted in a variety of scores. This material ranged from that which is fairly common knowledge to content which required familiarity with economics, anthropology, and sociology. In answering these items the reader must have some knowledge of the fields to read the material with understanding and be able to identify the correct responses. The highest score in this block of items was 85% and required reading about fairly commonly understood information. The lowest score was 38% and required some background in anthropology. Considering the difficulty of the material, the percentages were indeed good.

Objectives 37 - 44: Literature

Scores on literary passages averaged 78%. The average for prose material was 77% and for poetry was 81%.

Students scored high on the simpler prose passages. For seven items, scores were above 90% and for seven others, the scores were above 80%. Where many students made incorrect choices, the items were difficult and the response alternative which they selected was quite plausible. The test included two poems. A number of words were left out of the poems, and students were required to supply the missing words from lists containing four choices. The students were quite successful in doing this except for two items. On an item which required interpretive comprehension (Objective 43), 63% made the correct response, and on an item which required a combination of inferential comprehension and an understanding of the figurative sense of the phrase (Objective 26), 38% of the students were correct.

Objectives 45 - 60: Science

The IIEP contained several items related to health. The material was written in a style common to news reports, and the results indicated that over 80% of the students understood the information in the passage (Objective 57).

Literal Comprehension

In regard to literal comprehension, the average score was 79% correct. Scores were high when the vocabulary was easier, contextual clues were evident, or the content was familiar. They became lower when the vocabulary was difficult, the content unfamiliar, or the alternative response choices plausible. Students scored high in noting details which are important to them in everyday life, but were less accurate in discriminating information which is ordinarily of less concern to them. For example, when using part of a television schedule as reference (Objective 1), 95% of the students identified correctly that the cartoons began at 2:00 p.m., but only 75% noted correctly that "Children's Variety" was being run for at least the second time.

Inferential Comprehension

Scores averaged 76% for items requiring inferential comprehension. Students did quite well in associating cause and effect to arrive at the implied meanings of passages. For 11 of the 16 items which required the students to identify implied meanings, the average percentage of correct responses was 83%.

Interpretive Comprehension

There were only two items on the test requiring interpretive comprehension. Eighty-four percent of the students answered the first item correctly (Objective 27), and 63% of them were correct on the second item (Objective 43).

Discussion of the Results

The majority of the IIEP items are set in a contextual format which is very similar to ordinary reading situations. The items are imbedded in the text rather than following the passages. This type of comprehension requires attention to both the meanings and the functions of words in sentences. This cloze procedure is excellent for assessing reading ability.

Some content areas were not sampled in the test. A much broader sample of content areas would make for a considerably improved test. In the present test only a few fields, and not the most common ones, were tested. The addition of items from the more commonly understood and studied subject matter fields is recommended.

Despite the concern for a broader spectrum of content areas, the results of the present IIEP can be taken as a reasonable representation of eleventh grade students' reading abilities. The results show that eleventh graders in Illinois read rather well, particularly in regard to everyday materials, such as news articles, television guides, and advertisements.

SECTION II

TEACHER EXPECTATIONS

CHAPTER 5

TEACHER EXPECTATIONS OF STUDENT PERFORMANCE

During the 1978 test, reading teachers in sampled schools responded to a survey asking them to estimate the percentage of students who would obtain the correct answer to each reading item. Teachers estimated the performance only of those students whose grade level they taught. Fourth grade teachers estimated performance of fourth grade students on the fourth grade items, eighth grade teachers estimated eighth graders' performance, and eleventh grade teachers estimated eleventh graders' performance. The items were then grouped by objective and compared with actual student performance. Where the same objectives were measured at different grade levels, comparisons were made between teachers' expectations and student performance across grade levels.

Summaries of the teacher expectation data indicated that

- TEACHER ESTIMATES WERE WITHIN ONE PERCENTAGE POINT OF STUDENT SCORES AT THE FOURTH AND EIGHTH GRADES.

- ELEVENTH GRADE SCORES SLIGHTLY SURPASSED TEACHER EXPECTATIONS.

- TEACHER ESTIMATES WERE MORE ACCURATE FOR LITERAL COMPREHENSION.

- TEACHERS ESTIMATED ACCURATELY FOR STUDENT SCORES ON THE LITERAL COMPREHENSION OF PROSE LITERATURE AND EVERYDAY READING MATERIAL, SUCH AS NEWS ARTICLES.

- STUDENT SCORES SURPASSED TEACHER EXPECTATIONS FOR INFERENTIAL COMPREHENSION.

- STUDENT SCORES FOR INTERPRETIVE COMPREHENSION WERE HIGHER THAN TEACHER EXPECTATIONS ON MATERIAL RELATED TO SOCIOLOGY, BUT LOWER REGARDING PROSE LITERATURE.

Fourth grade teachers overestimated student performance on four of the seven objectives tested. Their average expectation was 69%, as compared to an average student performance of 68%.

Eighth grade teachers were also accurate in their estimation of student performance. Student performance averaged 74%, as opposed to an average teacher expectation of 73%. Of the ten reading objectives tested, they overestimated student performance on half of them.

In contrast, eleventh grade teachers underestimated student performance on 14 of the 17 objectives tested. Their average teacher expectation of 70% was exceeded by an average student performance of 77%.

Analysis of Reading Objectives - Implications For Future Research

On the whole, teachers at all three grades were more accurate in their expectations of student ability in reading than they were in the subject area of mathematics. Literal comprehension of labels and signs and literal comprehension of prose were measured at the fourth, eighth, and eleventh grades. Teacher perceptions of student ability on the literal comprehension of signs were within 6% of actual student performance across all three grades. Teachers underestimated student achievement at the fourth and eleventh grades, and eighth grade teacher expectations were identical to actual student results. Teacher expectations approximated student performance on student ability to literally comprehend prose. Teacher expectations were within 5% of actual student attainment across the three grades. They slightly overstimated student achievement at the fourth and eighth grades. Eleventh grade teachers, while very close in their expectations, overestimated student performance.

Two objectives measuring the literal and inferential comprehension of news articles were tested at the eighth and eleventh grades. Teachers, once again, exhibited a large degree of accuracy in their expectations of student performance. Teachers were within 5% of actually predicting student ability to literally comprehend news articles. Teachers were even more accurate in their anticipation of student ability to inferentially comprehend news articles. Teacher expectations were within 1% of actual student performance at both the eighth and eleventh grades. Since student ability to literally and inferentially comprehend news articles and literally comprehend labels and signs measure reading skills which are needed in day-to-day life, it would appear that teachers are very accurate in their expectations on these "basic skills."

Teachers were somewhat more discrepant on reading objectives involving student ability to interpret reading passages. Student achievement with respect to the interpretive comprehension of prose was tested at the fourth and eighth grades. Teachers at both grade levels overestimated actual student performance. Eighth grade teachers overestimated student performance by 13%. Eleventh grade teacher expectations exceeded student performance by 15%. The results would appear to indicate that students have distinct difficulties in interpreting reading material.

As was stated earlier, eleventh grade teachers underestimated student performance on 14 of the 17 reading objectives. The largest degree of underestimation occurred on seven objectives. Teachers underestimated student ability with respect to the interpretive comprehension of reading material involving anthropology and sociology by 25%. Student performance was greater than teachers anticipated on two objectives involving poetry. Teachers underestimated student ability to literally comprehend poetry by 18%, and they also underestimated student ability to inferentially comprehend poetry by 17%. Teacher expectations were 13% below actual student performance on the inferential comprehension of health passages, the inferential comprehension of prose, and the literal comprehension of forms and applications. Eleventh grade teachers also underestimated student ability to literally comprehend reference sources by 11%.

CHAPTER 6

RESULTS FOR SPECIFIC OBJECTIVES

News Articles

Objective 1 assessed literal comprehension of newspapers, magazines, schedules and advertisements, specifically student ability to read and understand the direct meaning of a passage. As can be seen in Table 1, teachers at both the eighth and eleventh grades estimated student achievement accurately.

Although eight out of ten teachers at each grade reported student exposure to the subject matter, eleventh grade teachers expressed some concern about the level of item difficulty used to measure the objective. Regardless of this, student results would appear to reflect growth on this particular objective from the eighth to the eleventh grade.

Table 1

NEWS ARTICLES

Objective	Grade Tested	Teacher Expectation of Student Performance	Actual Student Performance	Underestimation/ Overestimation
Literal Comprehension (1)	8	75%	77%	- 2%
	11	81%	86%	- 5%
Inferential Comprehension (2)	8	76%	77%	+ 1%
	11	85%	84%	- 1%

Student ability with respect to inferential comprehension of newspapers, magazines, schedules and advertisements was measured by Objective 2 (Table 1). The specific skill assessed was the ability to read and understand the implied meaning of a passage.

Teachers at both grades were extremely accurate in their predictions of student performance.

Teachers at each grade reported student exposure to the subject matter assessed. Thirteen percent of the eighth grade teachers and 45% of the eleventh grade teachers felt the questions used to measure the objective were too easy. Regardless of this, it would appear that teachers at both grades have a firm understanding of student reading ability on this objective.

Labels and Signs, Forms and Applications

Objective 5 (Table 2) assessed student reading achievement in the area of life skills. Student ability to read and understand the direct meaning of labels and signs was measured at all three grades. Student results would appear to indicate a progressive growth from the primary to the secondary grades.

While eighth grade teacher expectations exactly paralleled student performance, fourth and eleventh grade teachers underestimated student performance to a small extent. Teachers at all three grades felt students had been exposed to the subject matter. Fourth grade teachers indicated that the difficulty level of the questions was appropriate, even though 33% of the eighth grade teachers and 54% of the eleventh grade teachers thought the questions were too easy.

A similar objective was measured at the eighth grade. Objective 6 (Table 2) assessed student ability to read and understand the implied meaning of labels and signs.

Table 2

LABELS AND SIGNS - FORMS AND APPLICATIONS

Objective	Grade Tested	Teacher Expectation of Student Performance	Actual Student Performance	Underestimation/ Overestimation
Literal Comprehension of Labels and Signs (5)	4	69%	75%	- 9%
	8	84%	84%	
	11	86%	91%	- 5%
Inferential Comprehension of Labels and Signs (6)	8	73%	66%	+ 7%
Literal Comprehension of Forms and Applications (9)	11	65%	78%	-13%

A substantial number of teachers reported student exposure to this type of reading skills and, on the whole, felt the item difficulty was appropriate. Nevertheless, teachers slightly overestimated student performance. The item used to measure the objective asked students to infer from a label which type of insect would not be killed by that particular bug spray.

Student ability to read and understand the direct meaning of forms and applications was assessed by Objective 9 (Table 2) at the eleventh grade. Teachers underestimated student performance.

The item used to measure the objective was an application for credit, and students were asked to indicate which words completely completed the application. A large number of eleventh grade teachers doubted whether students had been exposed to subject matter of this type of life skill. This doubt is manifested in their expectations of student performance. Teachers, on the whole, stated that the difficulty level of the question was appropriate.

Reference Sources

Three objectives measured student achievement on reference sources (maps, dictionary, table of contents, etc.). Nine out of ten teachers at those grades reported student exposure to the subject matter and appropriate item difficulty. These results are displayed in Table 3 below.

Table 3

REFERENCE SOURCES

Objective	Grade Tested	Teacher Expectation of Student Performance	Actual Student Performance	Underestimation/ Overestimation
Literal Comprehension (13)	4	72%	61%	+11%
	11	71%	82%	-11%
Inferential Comprehension (14)	8	62%	64%	- 2%
	11	70%	60%	+10%
Interpretive Comprehension (15)	4	70%	62%	+ 8%

Economics, Anthropology/Sociology

Objective 17 assessed student achievement on reading items involving the social sciences, specifically economics at the eighth and eleventh grades. Student ability to read and understand the direct meaning of a passage concerning economic matters was measured. As can be seen in Table 4, teachers underestimated student performance at the eighth grade. Eleventh grade teacher expectations were very close to actual student performance. Students actually performed better than teachers expected at both grades.

Three objectives assessed student achievement with respect to reading passages related to anthropology and sociology at the eleventh grade.

Objective 25 (Table 4) measured student ability to read and understand the direct meaning of a passage when the content encompassed anthropological or sociological material.

Table 4

ECONOMICS, ANTHROPOLOGY/SOCIOLOGY

Objective	Grade Tested	Teacher Expectation of Student Performance	Actual Student Performance	Underestimation/ Overestimation
Literal Comprehension of Economics (17)	8	69%	79%	-10%
	11	69%	73%	- 4%
Literal Comprehension of Anthropology/ Sociology (25)	11	60%	67%	- 7%
Inferential Comprehension of Anthropology/ Sociology (26)	11	57%	62%	- 5%
Interpretive Comprehension of Anthropology/ Sociology (27)	11	59%	84%	-25%

Teachers predicted that six out of ten students would be proficient on the items assessing the objective. Actual student performance was slightly better. Although almost 80% of the teachers indicated that students had been exposed to the subject matter, 21% stated that the questions used to assess the objective were too difficult.

Student ability to read and understand the implied meaning of a passage when the material was related to anthropology or sociology was measured by Objective 26 (Table 4) at the eleventh grade. Teacher expectations were fairly accurate.

Prose

Objective 37 assessed student vocabulary skills and student ability to read and understand the direct meaning of a passage and determine which word best completed a sentence. Student performance at all three grades was tested. As can be seen in Table 5, teachers at all three grades were very accurate in their expectations.

Table 5

PROSE

Objective	Grade Tested	Teacher Expectation of Student Performance	Actual Student Performance	Underestimation/ Overestimation
Literal Comprehension (37)	4	65%	62%	+ 3%
	8	75%	74%	+ 1%
	11	72%	77%	- 5%
Inferential Comprehension (38)	4	53%	74%	-21%
	8	77%	69%	+ 8%
	11	72%	75%	-13%
Interpretive Comprehension (39)	4	70%	57%	+13%
	8	66%	51%	+15%

With Objective 38, teachers at the fourth grade greatly underestimated student performance. Although almost 70% stated that students had been exposed to the subject matter, 48% thought the question used was too difficult. They accordingly predicted that slightly better than half of the students would be successful. Actual student performance would not appear to substantiate these perceptions on the part of teachers.

Objective 39 also measured student ability to read and evaluate a passage in relation to stated criteria at the fourth and eighth grades. Students were given a story and asked to answer questions using their interpretive skills. As Table 5 shows, teachers overestimated student performance at both grades.

Poetry

Student ability to read and understand the direct meaning of a poetry passage was assessed at all three grades by Objective 41. On this objective, students were given a poem and asked to indicate which word best completed the sentence. As Table 6 indicates, teachers underestimated student performance at each grade.

Table 6

POETRY

Objective	Grade Tested	Teacher Expectation of Student Performance	Actual Student Performance	Underestimation/ Overestimation
Literal Comprehension (41)	4	75%	91%	-16%
	8	79%	86%	- 7%
	11	61%	79%	-18%
Inferential Comprehension (42)	11	68%	85%	-17%
Interpretive Comprehension (43)	11	67%	63%	+ 4%

Even though fourth grade teachers felt students had been exposed to the subject matter and thought that the item was of an appropriate degree of difficulty, they underestimated student performance.

Eighth grade teachers reported the largest degree of student exposure to the subject matter. Seventeen percent of the teachers felt that the questions assessing the objective were too easy. Eighth grade teachers nevertheless underestimated student performance.

The largest discrepancy between teacher expectations and actual student performance occurred at the eleventh grade. A substantial number of teachers were of the opinion that students had not been exposed to the subject matter, and an even larger number (27%) indicated the questions were too difficult. These concerns appear to be reflected in their expectations of student performance.

Actual student performance greatly exceeded teacher expectations. The results would seem to indicate that student achievement is much better with respect to this objective than teachers' expectations.

Objective 42 (Table 6) measured student ability to read and understand the implied meaning of a poem and was assessed at the eleventh grade. Students, as they were in the previous objective, were given a poem and asked to indicate which word best completed the sentence. Teachers, once again, underestimated student performance to a large extent.

Objective 43 assessed the interpretive comprehension ability of students with respect to poetry at the eleventh grade. Students, once again, were given a poem and asked to indicate which word best completed the sentence. As Table 6 shows, teachers were very accurate in their expectations of student success.

Health

Two reading objectives relating to science, specifically health, were assessed at the eleventh grade.

Student ability to read and understand the direct meaning of a passage related to health concerns was measured by Objective 57. As Table 7 shows, eleventh grade student performance was greater than teacher expectations.

Table 7

HEALTH

Objective	Grade Tested	Teacher Expectation of Student Performance	Actual Student Performance	Underestimation/ Overestimation
Literal Comprehension (57)	11	75%	88%	-13%
Inferential Comprehension (58)	11	71%	72%	- 1%

In assessing this objective, students were given a passage and asked to indicate which word best completed the sentences contained in it. Almost 90% of the teachers stated that students had been exposed to the subject matter and, to a lesser extent, felt that the items used to measure the objective were of an appropriate degree of difficulty. Although the latter may have had some influence on teacher expectations, student performance would not appear to reflect that opinion.

APPENDIX A

PROCESS USED TO OBTAIN THE CURRICULAR ANALYSES

Reading educators from every part of Illinois were nominated by reading curricular experts contacted from the Illinois State Board of Education. Nine of those nominated were selected to represent teachers, administrators, and curriculum experts. An effort was made to represent small, medium, and large schools and districts as well as the different geographical areas of Illinois.

The nine reviewers received copies of the test booklets and the student scores for each item. They wrote their analysis and interpretation of the student results for each item.

A second group of reviewers was chosen to critique and edit the interpretations of the first reviewers.

The second group of reviewers analyzed the results by grade level and drafted the grade level curricular analyses. A reading expert was selected from outside the group to critique all previous analyses and draft the overview curricular analysis paper.

The papers were reviewed, critiqued, and edited numerous times by reading and testing experts inside and outside the Illinois State Board of Education.

APPENDIX B

DESCRIPTION OF THE TEACHER EXPECTATION RESEARCH

At the time the 1978 IIEP was administered, principals of participating schools were asked to select two teachers familiar with the reading being taught at the appropriate grade level. Before seeing any student results, the teachers examined each item in the test. They stated whether the students had been exposed to the subject matter and whether the item was of appropriate difficulty level. They also estimated the percentage of students who would obtain the correct answer.

The teacher responses were analyzed and the results are reported in Section II of this report.

APPENDIX C

THE READING OBJECTIVES OF THE IIEP AND THEIR DEVELOPMENT

The IIEP is an objective referenced test. A committee of Illinois experts developed the reading objectives.

Reading educators were nominated by peers. The nominees were reviewed by consultants and Illinois State Board of Education staff; six persons were selected for the committee. The committee was representative of Illinois geographical areas and types of districts. It also included educators with elementary, junior high, high school, and college teaching experience, and administrative experience.

The committee members and Illinois State Board of Education staff collected sets of objectives. Subsequently, the committee spent two days drafting and refining objectives for the IIEP. During the two-day period the committee members pilot tested the objectives on a number of test items, refining the objectives after each pilot test. They returned home for a period of two months to reflect on the objectives and pilot tested the objectives on additional test items.

Finally, the committee reconvened, refined the objectives, and pilot tested them on a third set of test items. The committee reached consensus on the reading objectives for the IIEP. Presentation and description of the IIEP reading objectives follows.

Reading Objectives

The reading objectives upon which the IIEP is based are described by the following matrix. Each cell in the matrix constitutes one objective that could be tested. As can be seen, there are 60 reading objectives. This large number of objectives precludes testing all of them in any one year.

MATRIX OF READING OBJECTIVES

READING CATEGORIES BY ABILITIES

Reading Categories	Reading Abilities 1 Literal Comprehension	2 Inferential Comprehension	3 Interpretive Comprehension	4 Critical Comprehension
I. LIFE SKILLS				
A. NEWSPAPERS AND MAGAZINES Schedules, Advertisements	(1) *8th, 11th	(2) 8th, 11th		
B. LABELS AND SIGNS Recipes, Illustrations	(5) 4th, 8th, 11th	(6) 8th		
C. FORMS AND APPLICATIONS Report Cards	(9) 11th			
D. REFERENCES Maps, Dictionary, Alphabetical Order, Table of Contents	(13) 4th, 11th	(14) 8th, 11th	(15) 4th	
II. SOCIAL SCIENCE				
A. ECONOMICS	(17) 8th, 11th			(24)
B. ENVIRONMENTAL				(24)
C. ANTHROPOLOGY/SOCIOLOGY	(25) 11th	(26) 11th	(27) 11th	(24)
D. HISTORY				(24)
E. GOVERNMENT				(24)
III. LITERATURE				
A. PROSE	(37) 4th, 8th, 11th	(38) 4th, 8th, 11th	(39) 4th, 8th	(24)
B. POETRY	(41) 4th, 8th, 11th	(42) 11th	(43) 11th	(24)
IV. SCIENCE				
A. PHYSICAL				(24)
B. EARTH				(24)
C. BIOLOGY				(24)
D. HEALTH	(57) 11th	(58) 11th		(24)

**Grade levels where objectives were tested in 1978 are not shaded.*

IIEP READING OBJECTIVES

The conceptual foundation of the reading objectives of the Illinois Inventory of Educational Progress (IIEP) is the set of reading categories and abilities described below. The reading categories are self-evident and are listed without further description. Descriptions of the reading abilities follow the list of categories. Each reading objective describes a particular ability in reference to a specific category.

Reading Categories

I. LIFE SKILLS

- A. NEWSPAPERS AND MAGAZINES
- B. LABELS AND SIGNS
- C. FORMS AND APPLICATIONS
- D. REFERENCES

II. SOCIAL SCIENCE

- A. ECONOMICS
- B. ENVIRONMENTAL
- C. ANTHROPOLOGY/SOCIOLOGY
- D. HISTORY
- E. GOVERNMENT

III. LITERATURE

- A. PROSE
- B. POETRY

IV. SCIENCE

- A. PHYSICAL
- B. EARTH
- C. BIOLOGY
- D. HEALTH

Reading Abilities

1. Literal comprehension - the ability to read and understand the direct (stated) meaning of a passage. *It requires selection of a correct response on the basis of word analysis, word meaning, syntactic relationship, or any combination of these. Literal comprehension involves only one step; the reader sees the word and recognizes its meaning. Recognition of the literal meaning of difficult vocabulary is still literal comprehension.*

2. Inferential comprehension - the ability to read and understand the implied meaning of a passage. *It involves the mediation of an extra, hidden step to identify the appropriate implications. Two steps are necessary. The reader must understand the literal meaning of the words; the reader must also perceive that there are connotations, nuances, or implications beyond a literal interpretation. In the passage, clues are provided to help the reader construct the necessary mediating symbol for arrival at the appropriate conclusion.*

3. Interpretive comprehension - the ability to read and evaluate a passage in relation to (stated) criteria. *It requires comparisons among inferences and simultaneous measuring against a standard or standards. There are at least three steps, and the passage contains multiple clues. The reader must analyze the passage to identify the denoted criteria, perceive the relationships among the ideas, and synthesize these into the most appropriate judgment.*

4. Critical comprehension - the ability to apply personal, defensible criteria in interpreting and evaluating a passage. *This necessitates the creation of one's own criteria and multiple comparisons of these to the passage. It demands at least three steps in addition to the development of one's own standards. The reader must have a set of concepts and values regarding the content of the passage. From this perspective the reader must judge the author's purpose, truthfulness, fair-mindedness, and bias. The reader must also judge the validity of the passage and be able to describe his/her judgment criteria. Finally, the reader's understanding of the passage, criteria for evaluation, and process of application must be reasonable.*

APPENDIX D

INDEX OF READING OBJECTIVES AND ITEMS FOR THE 1978 IIEP

FOURTH GRADE	
Objective	Item
5	80
5	81
13	87
13	88
15	86
37	82
37	83
37	84
37	89
37	90
37	91
37	92
37	93
37	94
37	95
37	96
37	100
37	101
37	102
37	103
37	104
37	105
37	106
38	107
39	85
41	97
41	98
41	99

EIGHTH GRADE	
Objective	Item
1	91
1	94
1	95
1	120
1	121
1	122
1	123
2	92
2	93
5	89
5	90
5	101
6	100
14	117
14	118
14	119
17	124
17	125
17	126
17	127
17	128
17	129
17	130
17	131
17	132
17	133
37	98
37	102
37	103
37	104
37	105
37	106
37	107
37	108
37	109
37	110
37	111
37	112
37	113
37	114
37	115
37	116

EIGHTH GRADE CONTINUED	
Objective	Item
38	99
39	96
39	97
41	134
41	135
41	136

INDEX OF READING OBJECTIVES AND ITEMS FOR THE 1978 IIEP (continued)

ELEVENTH GRADE

Objective	Item
1	96
1	99
1	100
1	121
1	122
1	123
1	124
2	97
2	98
5	95
5	101
9	129
9	130
9	131
9	132
9	133
9	134
9	135
9	136
13	115
13	116
14	114
17	125
17	126
17	127
17	128
25	154
25	156
26	155
26	157
26	158
26	159
27	160
37	102
37	103
37	104
37	105
37	106
37	107
37	108
37	109
37	110
37	111
37	112
37	113
37	117
37	118
37	119
37	143
37	144
37	145
37	146
37	147
37	148
38	120
41	149
41	150
41	151
41	152
42	137
42	139
42	153
42	161
42	162
42	164
42	165
42	166
43	163
57	138
57	140
57	141
57	142

APPENDIX E

LIST OF PUBLICATIONS DESCRIBING THE 1978 IIEP RESULTS

Executive Summary

Mathematics Curricular Analyses and Teacher Survey Results

Reading Curricular Analyses and Teacher Survey Results

Citizenship Curricular Analyses and Teacher Survey Results

Mathematics Item Results

Reading Item Results

Citizenship Item Results

Fourth Grade Status Report

Eighth Grade Status Report

Eleventh Grade Status Report

These publications are available upon request.

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